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RFC # 490

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RFC # 477

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SURROGATE RJS FOR UCLA-CCN

By using UCSB's Network Standard RJS* users can now gain access to UCLA-CCN's RJS without converting to the UCLA protocol. In addition, the need to use and create files in an intermediate host is avoided. For example, TIP users may operate with hot card readers and printers through UCSB's Remote Job Server and have their jobs execute at UCLA-CCN. The disadvantages of this scheme as compared to direct connection to UCLA are as follows:

1. A small amount of additional JCL is required to route jobs from UCSB to UCLA.
2. A UCSB batch account must be opened.
3. Turnaround time includes waits in UCSB batch queues.
4. The current implementation requires separate submission and retrieval steps.
5. The RJS terminal used for submission/retrieval at UCLA-CCN should not be accessed online until all transfers to/from UCSB are complete.

Hopefully, these disadvantages are outweighed by the convenient interface to standard RJS.

Attached is the document which describes this procedure to access UCLA-CCN.

*RFC #436 announces RJS at UCSB and RFC #477 describes its use.

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UCLA REMOTE JOB SUBMISSION FROM UCSB

Introduction

Users of the IBM 360/75 at UCSB may now route jobs to and from UCLA-CCN (IBM 360/91). Only the reading, printing, and punching are handled at UCSB while the scheduling, allocation of resources, and execution are handled at UCLA. The program described below operates by establishing operator and data connections with UCLA's Remote Job Service through the ARPA Network and issuing operator commands to control the submission and retrieval of jobs. Thus it is possible for a user to run jobs on UCLA's 360/91 almost as if he were at UCLA.

Procedure

Submission and retrieval are two separate phases which the user must initiate for each of his UCLA destined jobs. Usually, two UCSB jobs will be required for the two phases of one UCLA job. Exceptions do occur using the BATCH options described below and for jobs with a guaranteed fast UCLA turnaround (e.g. QUICKRUN jobs).

Commands are issued through JCL to the local process and resultant actions and messages are recorded in the RJS system log on the user's listing. The user must be aware of the timing of his commands, e.g. a request to retrieve print output for a specific job will result in an error condition if the job has not finished executing at UCLA. Available commands are READ, PRINT, PUNCH, STATUS and TERMID.

Effort has been made to provide the user with fairly intelligible error diagnostics although this is not always possible. Error conditions are described in the section "ERRORS".

Job Submission

The READ command is used to send jobs to UCLA. It is the default command if none other is specified. UCLA jobs may be batched together under a single read operation. Great care should be taken to terminate the batch with the correct delimiter (see DD Cards below) so that any following non-UCLA jobs won't be sent to UCLA by mistake. A suggested procedure, if submitting jobs from the campus computer center, would be to indicate on the job submission card the intended destination. If the job is accepted by UCLA a message from UCLA will be recorded indicating the job name and number of cards received.

Single Job Retrieval

PRINT (JOBNAME) and PUNCH (JOBNAME) are used to explicitely fetch print and punch output, respectively. The UCLA RESET command is used to set all job priorities the same, and then to set the named job's priority to the highest value. An unknown command, HEREIAM, is used for synchronization purposes only. If the named job is not ready for output the local process will terminate with a timeout error (the current timer is set at one minute).

Multiple Job Retrieval

PRINT (*) and PUNCH (*) are used to fetch all waiting output. These commands should always be preceeded by the TERMID command. Users who have their own RJS terminal assigned to them will use this mode.

UCSB Job Control Cards

EXEC Card

The catalogued procedure to be executed is named UCLARJS. Parameters are used to specify which functions are to be performed. The general form of the execute card is:

```
//anyname EXEC   UCLARJS,PARM.RJS='...functions...'
```

PARM Field

The following list defines the allowable parameters and their indicated functions. All parameters are executed in sequence and separated by commas.

READ - Open the reader channel and send 80 column records from the SYSIN data set.

PRINT(JOBNAME) - Set indicated job's priority to highest value and retrieve the print output to the SYSPRINT data set. Records over 132 characters are folded to the next line.

PRINT(*) - Retrieve all print jobs.

PUNCH(JOBNAME) - Set indicated job's priority to highest value and retrieve 80 column punch output to the SYSPUNCH data set.

PUNCH(*) - Retrieve all punch jobs.

STATUS - Query UCLA about the status of all jobs assigned to this RJS terminal.

TERMID(NAME-PASSWORD) - Sign on as named RJS terminal. PASSWORD is optional and should be declared only if the terminal has a password. The local process always signs on initially as NETUCSB.

DD Cards

1. Reader - The SYSIN data set should have the following format to be able to send JCL and /* cards:

```
//RJS.SYSIN DD DATA,DLM=$$,DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
                .
                .
                .
            job(s)
                .
                .
                .
$$ (note, this special delimiter is required)
```

2. Printer - The default RJS.SYSPRINT data set is specified as SYSOUT=A.

3. Punch - The default RJS.SYSPUNCH data set is specified as SYSOUT=B.

4. RJS log - The default RJS.MESSAGES data set is specified as SYSYOUT=A.

Problems and Errors

Most problems encountered fall into one of the following categories:

1. UCLA-CCN or ARPANET down.
   This condition is usually noted when the local process attempts connection with UCLA. The error message is usually "INITIAL CONNECTION OPEN ERROR".

2. RJS terminal in use by a non-UCSB-jobshop process.
   This can occur if a user submits a job but signs on to his UCLA RJS terminal online prior to the local batch process coming into execution. This condition is usually noted by the appearance of "FAILURE or TIMEOUT IN OPERATOR, PRINT OR PUNCH CHANNEL" with completion code 252.

3. Job not ready to be retrieved.
   The local process attempts to set the priority of the indicated job but receives no successful response. This condition is also noted by the appearance of "FAILURE OR TIMEOUT IN OPERATOR, PRINT OR PUNCH CHANNEL" with completion code 252.

4. UCLA is unable to retrieve output because of an age-old bug.
   Unfortunately this condition can occur for very small amounts of output. It is usually noted by the message "BEGIN RETRIEVAL OF" followed by "(PROBABLE UCLA BUG).. PREVIOUSLY GOOD CONNECTION NOW HAS STATUS = 8". The output in this case is usually lost.

Cases 1 through 3 are corrected by waiting and then trying again. Other error messages may require reference to the NETWORK USER GUIDE or consultation with Computer Center or Computer Systems Lab personnel.

Examples

1. Submit a job to UCLA-CCN through RJS terminal NETUCSB.

```
//SUBMIT JOB (0000,ROBERTS),'PSYCH BOX'
//STEP1 EXEC UCLARJS
//RJS.SYSIN DD DATA,DLM=$$,DCB=(RECFM=F,LRECL=80,BLKSIZE=80)
//AAA000IC JOB ......
          .
          .
          .
          .
          .
$$
//
```

2. Retrieve print job AAA000IC from terminal NETUCSB.

```
//RETR JOB (0000,ROBERTS),'PSYCH BOX'
//STEP1 EXEC UCLARJS,PARM.RJS='PRINT(AAA000IC)'
//
```

3. Retrieve all print jobs from terminal NETRANDO.

```
//RETR JOB (0000,ROBERTS),'PSYCH BOX'
//STEP1 EXEC UCLARJS,'TERMID(NETRANDO),PRINT(*),STATUS'
//
```